

Running head: A STEP TO WELLNESS: NFPA 1582

Executive Development

A Step to Wellness: NFPA 1582 in a Volunteer Department

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July 2005

### Abstract

The problem is the Saginaw Township Fire Department (STFD) does not comply with National Fire Protection Association Standard 1582. The purpose of this paper is the development of a program for the implementation of NFPA 1582. The action research method was used to answer the following questions:

1. What are the key components of NFPA 1582?
2. What are the costs for the development/ implementation of an occupational medical program?
3. What are the procedures required for the implementation of an occupational medical program?

The procedures consisted of a literature review, interviews, and a survey of STFD personnel. The results confirmed that NFPA 1582 is an important standard for firefighter health and safety, and recommended that STFD adopt NFPA 1582.

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## A Step to Wellness: NFPA 1582 in a Volunteer Department

### Introduction

Fire departments nationwide disburse millions of dollars and expend countless hours purchasing, maintaining, and training on apparatus and equipment. Yet, most departments allocate a fraction of those same assets to support the health and fitness of their most valuable resource—firefighters. The fire service is a strenuous, physically challenging and inherently risk-filled occupation. Firefighters typically perform physically demanding and stress-filled tasks in hazardous environments for extended periods of time without the benefit of nutrition and sleep. To enable firefighters to continuously function at this level of performance, without posing a risk to themselves or others, requires a system to frequently monitor and maintain personnel health and fitness.

The National Fire Protection Association (NFPA) has developed a comprehensive set of standards for the fire service to address the critical issue of firefighter safety and health. One of these standards is NFPA 1582, *Comprehensive Occupational Medical Program for Fire Departments*. This standard has been developed to facilitate the establishment of a medical maintenance program for fire service personnel.

The problem is that NFPA Standard 1582 requires fire departments to annually conduct medical evaluations of the incumbent members of their department and the Saginaw Township Fire Department (STFD) does not have an established departmental program for compliance to this standard.

The purpose of this paper is the development of a departmental program for the implementation of occupational medical evaluations of the incumbent members of the Saginaw

Township Fire Department as specified in NFPA 1582. The action research method was used to answer the following questions:

1. What are the key components of an occupational medical evaluation program identified by NFPA 1582?
2. What are the monetary costs associated with the development and implementation of an occupational medical program?
3. What is (are) the necessary procedure(s) required for the successful implementation of an occupational medical program?

### Background and Significance

STFD is a combination department with an ISO rating of four that serves 40,000 people in a residential/commercial community covering 29.4 square miles. The department provides fire suppression, extrication, hazardous materials response, ice and water rescue, and special rescue services (high angle, trench, and confined space) from three stations, utilizing 12 apparatus, to 800 calls annually. The department is staffed by full time personnel consisting of the Chief, a Supervisor of Fire Prevention and Code Enforcement, a Training and Readiness officer, a Public Safety Educator, an Inspector/Code Enforcement officer, and two secretary/dispatchers. The firefighter/operations staff consists of 85 paid-on-call personnel.

During the 47-year history of STFD, the department has never experienced a firefighter fatality. Despite this positive history of the department, a United States Fire Administration [USFA] (2002) study of firefighter fatalities has shown that no department regardless of size, location or affiliation is immune to the possibility of a fatality. The leading cause, as reported by LeBlanc and Fahy (2005), of firefighter fatalities in 2004 were the result of sudden cardiac death

(47 percent). A further finding of this report underscores the importance of annual medical evaluations as evidenced by the prevalence of pre-existing conditions.

Over the past 25 years, post mortem information or other details on the victim's medical histories have been available for 701 of the 1,237 sudden cardiac victims. Of those 701 victims, 47.6 percent had had prior heart attacks or undergone bypass surgery or angioplasty/stent placement and another 32.4 percent had severe arteriosclerotic heart disease. LeBlanc and Fahy (2005, p. 4).

Although STFD in the past has taken a very proactive and aggressive approach to firefighter safety and wellness, the issue of mandatory physical examinations has never been resolved. Since 1991 STFD has required all new firefighters to successfully pass a physical examination, loosely based upon the criteria of NFPA 1582, before being accepted for employment. All members hired prior to 1991 were only required to pass a very simple physical exam. Regardless of the member's age or length of employment these pre-employment examinations are the only physicals required of members during their tenure with the department.

An initiative by STFD to begin periodic medical evaluations was started in 2002. The medical surveillance program was begun with the intent that, "a majority of personnel would participate" (R. Powell, personal communication, June 15, 2005). This was a cooperative program, approved and funded by the Saginaw Township board of trustees, between the fire department and Covenant Health Care-Occupational Health Services. The underlying criteria for the medical evaluations are derived from NFPA 1582 (R. Powell). The initial response from the personnel was favorable and approximately 16 personnel participated in 2002 (Saginaw Township Fire Department, 2003), 14 in 2003 (Saginaw Township Fire Department, 2004), and

20 in 2004 (Saginaw Township Fire Department, 2005). However, the participation rate has dropped and only 1 person has participated in 2005 (K. Ashton, personal communication, June 3, 2005). This drop in participation seems to indicate that while members may participate voluntarily with some regularity, without a mandatory requirement in place they will not participate on an annual basis.

STFD has been very fortunate in the past in the fact that it has not experienced a firefighter fatality. However, in terms of firefighter fatalities, past performances are not a true indicator of future outcomes. Statistically, the longer the department functions without some form of firefighter health and wellness program increases the possibility of the occurrence of a fatality.

Mandatory physical requirements and evaluations have become one of the major focal points for the reduction of firefighter deaths by fire service organizations in recent years. Much of this attention is the result of analysis and research conducted by the United States Fire Administration (USFA). This analysis has begun to “identify trends in mortality” USFA (2002, p. 1) to better target prevention efforts. One of these trends is the high incidence of sudden cardiac death and some of the best prevention strategies include a group of standards from NFPA. This set of standards include *NFPA 1500, Standard on Fire Department Occupational Safety and Health Program* which requires a firefighter health and fitness program based on *NFPA 1583, Standard on Health-Related Fitness Programs for Fire Fighters*, and also requires medical evaluations based upon *NFPA 1582, Standard on Comprehensive Occupational Medical Program for Fire Departments*.

According to Federal Emergency Management Agency [FEMA] and National Fire Protection Association [NFPA] (2002, p. 29), roughly 73 percent of departments nationwide lack

any type of program to maintain basic firefighter fitness and health as required by NFPA 1500.

In addition to this lack of preventive measures, the studies of USFA and NFPA conclude that the incidence of firefighter fatalities has the potential to affect the personnel of all departments nationwide regardless of size, location, or affiliation.

One of the many topics of the National Fire Academy Executive Fire Officer Course, *Executive Development*, is the subject of organizational culture and the role of the executive fire officer as an agent of cultural change within the organization. The implementation of a mandatory medical program within STFD will require a change in the culture of the organization in respect to the importance and significance of personal health and wellness. This research paper will examine the processes and procedures necessary to effect the desired change in the organizational culture of STFD.

This research is related to the fifth operational objective of the USFA which is “to respond appropriately in a timely manner to emerging issues” *Executive Fire Officer Program-Applied Research Guidelines* (2003, p. II-3). Through the adoption and implementation of NFPA 1582, STFD can create a healthy workforce and subsequently provide a process for other departments to follow in an effort to reduce the number of firefighter fatalities.

## Literature Review

### *Key Components*

The purpose of NFPA 1582 “is to reduce the risk and burden of fire service occupational morbidity and mortality while improving the safety and effectiveness of fire fighters...”National Fire Protection Association (2003, Para 1.2).

A primary component of NFPA 1582 is the distinction that the fire department physician, and not the firefighter or individual department, is the ultimate user of this standard. The



standard provides “physician guidance text that provides a link between essential job tasks of a fire fighter...and the medical requirements in the standard” (NFPA, 2003, p. 1).

Furthermore, “the standard has delineated the document to address those medical issues of a candidate seeking to become a fire fighter, and those incumbents currently performing the tasks of firefighting” (NFPA, 2003, p. 1.).

A review of the section headings of *NFPA 1582, Standard on Comprehensive Occupational Medical Program for Fire Departments*, reveals the components of this standard.

1. Administration
2. Referenced Publications
3. Definitions
4. Role and Responsibilities
5. Essential Job Tasks
6. Medical Evaluations of Candidates
7. Occupational Medical Evaluation of Members
8. Annual Occupational Fitness Evaluation of Members
9. Essential Job Tasks-Specific Evaluation of Medical Conditions in Members

#### *Monetary Costs*

The financial burden of the medical evaluations has long been considered a major, if not primary, obstacle to the implementation of NFPA 1582. However, “one must measure that against long-term job related illnesses, injuries, and fatality costs” (NFPA, 2003, p. 2).

“I say you can’t afford not to establish such programs. Every department...should make a quality medical surveillance program a priority” Davis, Sandy (2002, p. 88).

Administrative and record keeping costs may be a deterrent to very large departments, however for STFD, “the additional costs are estimated to be minimal” (R. Powell, personal communication, June 15, 2005).

The '05-06 budget for the departmental medical surveillance program is \$12,000 and additional funds are available to expand the program. (R. Powell, personal communication, June 15, 2005).

As per the requirements of NFPA 1582 the estimated costs for member evaluations are approximately \$375 per person, annually (Kathy Winiarski, personal communication, July 5, 2005).

### *Procedures for Implementation*

According to (Heifetz & Linsky, 2002, p. 11-12) the implementation of a new idea, process, or program is an adaptive process that will subsequently result in the loss of current values, beliefs, and habits. It is not change that people resist, but rather the loss that is associated with the change and adaptation.

People do not sense the possible positive results from adaptation; instead they focus upon the impending loss. They will avoid the painful adjustment of change by delaying the process, transferring the blame to someone else, or asking someone to rescue them. Heifetz and Linsky (2002, p. 13)

As discussed in National Fire Academy (2004, chap. 3), implementation is just one of four steps required for change as detailed in the APIE model for structural change. The success of implementation is contingent upon the completion of the previous stages of analysis and planning.

To ensure success and a positive reception, a medical surveillance program should be created so that the membership has the opportunity to buy in. Davis, Sandy (2002, p. 88).

“For candidates, the medical requirements of this standard shall be implemented when this standard is adopted by an AHJ (authority having jurisdiction), on and effective date specified by the AHJ” NFPA (2003, Para 1.3.1).

“When this standard is adopted by a jurisdiction, date(s) shall be set for members to achieve compliance by establishing a phase-in schedule for compliance with specified requirements, if needed” NFPA (2003, Para 1.3.2).

The process for formal adoption of NFPA 1582 requires a review, and vote of approval, of the standard by the township board and township attorney. (R. Powell, personal communication, June 15, 2005).

## Procedures

### *Process*

The desired result of the research, as established in the purpose statement, is the development of a departmental program for the implementation of occupational medical evaluations of the incumbent members of the Saginaw Township Fire Department. To achieve this desired result, several factors which could impact the implementation of the proposed program were analyzed.

The process used for this research began with a comprehensive literature review to discover what research had previously been completed, and search for existing literature on the subject of implementing NFPA 1582 in a volunteer department. The research included the review of fire service reports, journals, and magazines, a web based search for non-fire service writings, and a review of applied research projects with related subjects. The literature review

began at the Learning Resource Center (LRC) of the National Fire Academy in Emmitsburg, Maryland in January 2005. Further literature reviews were completed at: Melvin J. Zahnow Library, Saginaw Valley State University, Saginaw, Michigan; Rudy Zauel Public Library, Saginaw, Michigan; and the author's personal library between February and May 2005.

Kathleen Ashton, secretary/dispatcher, Saginaw Township Fire Department, provided personnel data and budget information of the current departmental medical surveillance program. This interview occurred on June 3, 2005.

Richard G. Powell, Chief, Saginaw Township Fire Department, was interviewed on June 15, 2005, to gather information concerning the origins, criteria, budget projections, and performance of the department's current medical surveillance program.

Kathy Winiarski, Covenant Medical Center-Occupational Health Services, Saginaw, Michigan, was interviewed by telephone on July 5, 2005 to review criteria of current departmental medical surveillance program, review requirements and criteria of NFPA 1582, and to obtain cost projections for providing medical evaluation services as required by NFPA 1582.

A survey instrument was utilized to gather background information and assess possible resistance to implementation of NFPA 1582. The survey was distributed to members of STFD present during a training meeting. All members present at the training, a total of 66 personnel, completed the surveys. In addition to basic background data, the information requested included: current participation in a regular exercise program; participation in the department's medical surveillance program; prior history of coronary artery/heart disease; prior history of high blood pressure; whether an individual, if determined to be unfit for duty, would take corrective action or resign from the department; current use of tobacco products; and whether an individual, if required for continued employment, would abstain from tobacco use. The survey results were

tabulated and entered into a computerized database (Microsoft Excel) and were utilized to answer research question three.

### *Limitations*

A limiting factor of this research was the lack of written information on the specific topics of implementation and costs of a medical evaluation program. The majority of the research written addresses the need and value of a medical evaluation program, but fails to focus on implementation methods or financial costs.

### *Results*

#### *Research Question 1*

What are the key components of an occupational medical evaluation program identified by NFPA 1582?

NFPA 1582 contains nine chapters which delineate four key components of an occupational medical evaluation program.

The first component discussed is the subject of administration. Included in this section is the scope and purpose of the standard, as well as guidelines for implementation.

Secondly, the roles and responsibilities of the fire department, fire department physician, and candidates and members are defined. The identification of the specific roles and responsibilities of each of the stakeholders establishes a foundation for implementation. The contents of this section provide details and definitions essential in the development of departmental policies or labor contracts.

The essential job tasks of candidates and members are defined in two chapters. Chapter five enumerates thirteen job tasks which may be assigned individually or collectively to specific job classification or titles of candidates and members. Specific medical conditions and their

relationship to each of the essential job tasks are methodically examined and defined in chapter nine. A vital element of these two chapters is the consequences of specific medical conditions upon essential job tasks and subsequently job titles or classifications.

Three chapters address the specific requirements of the medical evaluations for candidates and members. Each of these chapters contains pertinent information to enable the fire department physician to conduct comprehensive evaluations.

### *Research Question 2*

What are the monetary costs associated with the development and implementation of an occupational medical evaluation program?

Two specific financial considerations were examined to answer this question. The first issue related to the administrative/record keeping costs which would be incurred as a result of the program implementation. It was determined that the additional costs to maintain the necessary medical records would be negligible (R. Powell, personal communication, June 15, 2005).

The actual expense of the medical evaluations was the other financial consideration. The budget allocation for the current departmental medical surveillance program is \$12,000 and additional funds could be dedicated to an expanded program (R. Powell, personal communication, June 15, 2005). A copy of the medical requirements, for both candidates and members, from NFPA 1582 was provided for review to Covenant Health Care-Occupational Health Services. A detailed proposal was submitted by Covenant which all services and fees were enumerated by Kathy Winiarski, Covenant Health Care-Occupational Health Services, personal communication, July 5, 2005. The proposed cost of candidate evaluations was \$415 per person, and \$375 per person for member evaluations (Figure 1). Fees for gender specific tests (i.e. mammography and PSA) as well as immunization services were also provided.

*Figure 1**Member Medical Evaluation Costs*

*Physical Examination: includes medical history questionnaire, respirator questionnaire, vital signs, vision exam, audiogram, and pulmonary function (spirometry).	\$115.00
*Blood Test: includes CBC, electrolytes, renal function, liver function, glucose, and lipid panel.	\$70.00
*Urine test	\$5.00
*Chest x-ray	\$45.00
*EKG	\$70.00
*Physical agility test and body fat analysis	\$70.00
Mammography (Required each female over the age of 40)	\$128.50
PSA (Required each male over the age of 50)	\$34.15
Hepatitis B vaccine (3 dose)	\$159.00
Hepatitis A vaccine	\$59.40
* Indicates required service	

*Research Question 3*

What is (are) the necessary procedure(s) required for the successful implementation of an occupational medical program?

The process to implement NFPA 1582 begins with the adoption of the standard by the authority having jurisdiction (AHJ). The AHJ for Saginaw Township Fire Department is the Saginaw Charter Township board of trustees. The procedure for adoption requires the submission of the standard for review to the township board and township attorney. Township

policy requires a first reading of the standard at the next board meeting, at which time further action is tabled until the next meeting. During the next scheduled board meeting a second reading is conducted and a vote to adopt the standard is held (R. Powell, personal communication, June 15, 2005).

A survey (Appendix A) was conducted to answer questions relative to implementation within STFD. The results of the survey were tabulated and entered into a spreadsheet (Appendix B) for analysis. The primary goal of the survey was to quantify the potential for resistance from department personnel to the implementation of a mandatory program. Of the total respondents (Figure 2) only two personnel replied they would resign from the department, rather than take corrective action to remedy any deficiency, if they were determined to be medically unfit for duty.

*Figure 2*

*Survey Summary-All Respondents*

Age?	Range	18-61 yrs. old
	Average	35 yrs. Old
Years on department?	Range	3mos.-29 yrs.
	Average	10 yrs.
Approximate date of last physical?	Range	1-5 yrs.
	Average	2 yrs.
Do you currently exercise on a regular basis?	Yes	43
	No	23
Are you certified to wear SCBA?	Yes	61
	No	5



		Step to Wellness	17
Do you currently participate in the STFD annual Medical Surveillance Program?	Yes	16	
	No	50	
Do you have any prior history of coronary artery/heart disease?	Yes	1	
	No	65	
Do you have any prior history of high blood pressure?	Yes	10	
	No	56	
If it was determined that you are not medically fit for duty, would you?	Correct deficiency	64	
	Resign from dept.	2	
Do you currently use tobacco products?	Yes	18	
	No	48	

Five personnel of those who currently use tobacco products (Figure 3) responded they would resign from the department rather than abstain from tobacco products. Of those five individuals, three reported a prior history of high blood pressure, and one indicated they would also resign from the department if found to be unfit for duty.

*Figure 3*

*Survey Summary-Tobacco Use Respondents*

Would you be interested in smoking cessation class?	Yes	10
	No	8
If tobacco use was prohibited by employees of the fire department, would you?	Quit tobacco use	13
	Resign from dept.	5

A schedule (Appendix C) and departmental policy (Appendix D) were developed for the implementation of an occupational medical program for STFD. The implementation schedule

was designed to accommodate the procedural requirements and timelines of all stakeholders. A follow up survey (Appendix E) was created as an evaluation tool to measure the success of implementation.

### Discussion

The literature available for review for question one, was limited to the standard itself, thus no contradictory evidence was available for discussion. NFPA 1582 is a comprehensive, yet manageable, document which provides a solid foundation for the development and implementation of a fire service medical evaluation program. Each of the required components of an occupational medical program is delineated completely and clearly in the text of NFPA 1582. This standard was developed so that all of the stakeholders; fire department, firefighter, and fire department physician have clearly defined roles and responsibilities.

The research reveals that the financial impact of implementing NFPA 1582 is indeed substantial. The estimated cost of the medical evaluations is approximately \$375 per person, which for STFD translates into a \$45,000 annual expenditure. However, as stated in NFPA (2003, p. 2) that expenditure needs to be weighed against the expense of injuries and fatalities. While most departments struggle with basic equipment and personnel costs, STFD is in an enviable position of having the financial resources to implement a medical evaluation program (R. Powell, personal communication, June 15, 2005).

The primary issue which relates to the implementation of an occupational medical program is that of change. The department currently conducts a voluntary medical program with medical standards very similar to NFPA 1582. A major issue with the implementation of a new idea, process, or program is the loss, of the old idea, process, or program, which inevitably accompanies change. Heifetz and Linsky (2002, p. 11-12). One of the most revealing outcomes

of this research is the answers to two questions, # 9 (Table 2) and #12 (Table 3), in the survey. Both of these questions required the respondent to choose between changing a specific behavior or habit to remain with department, or resisting change and resigning from the department. The small number of personnel that responded they would resign from the department indicates a less than anticipated resistance to implementation of the program. It is important to note that the respondents provided their answers based upon a brief review of the requirements of NFPA 1582. They were not granted the advantage of having been educated on the positive benefits, or providing feedback on the implementation, of the program.

### Recommendations

The following recommendations are made based upon review of the completed research:

1. The Saginaw Township Fire Department must adopt NFPA 1582, *Comprehensive Occupational Medical Program for Fire Departments*. As specified in the standard a phase in schedule should be developed with a goal of full compliance within three years of adoption date.
2. The Saginaw Township Fire Department should implement immediately upon adoption of NFPA 1582, the requirements set forth in chapter six “*Medical Evaluation of Candidates*.”
3. The Saginaw Township Fire Department must request township board approval for an increased budget allocation, to coincide with the phase in schedule, for full funding of the Occupational Medical Program.
4. The Saginaw Township Fire Department should develop and employ an evaluation instrument to assess the impact and effectiveness of the Occupational Medical Program.

5. The Saginaw Township Fire Department should consider the organization of a departmental committee to begin analysis and planning for the adoption of NFPA 1583 “*Standard on Health-Related Fitness Programs for Fire Fighters.*”

A critical issue for other departments or individuals to consider when evaluating the implementation of NFPA 1582 is securing a consistent, annual financial commitment to ensure the program’s permanence. Departments should be encouraged to seek out and explore alternative and creative funding solutions. The fire service has proven to be one of the most resourceful and creative organizations in the country, fully capable of attaining any goal they set their sights on. Simply stated, if fire departments truly establish firefighter health and safety as a priority, the necessary resources will develop.

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## Appendix A: Survey Instrument

NFPA 1582 Implementation Survey

The purpose of this survey is to gather information relevant to the feasibility of implementation of NFPA 1582 in Saginaw Township Fire Department. ALL replies to this survey are completely confidential and anonymity is assured.

1. Age \_\_\_\_\_
2. Years on department \_\_\_\_\_
3. Approximate date of last physical exam \_\_\_\_\_
4. Do you currently exercise (walk 1+ miles, lift weights, or participate in sports) on a regular (3 or more times weekly) basis? (circle one)    Y        N
5. Are you certified to wear SCBA? (circle one)    Y        N
6. Do you currently participate in the STFD annual Medical Surveillance Program?  
(circle one)    Y        N
7. Do you have any prior history of coronary artery/heart disease?  
(circle one)    Y        N
8. Do you have any prior history of high blood pressure?  
(circle one)    Y        N
9. If, following the completion of a department mandated physical evaluation it was determined that you are not medically fit for duty, would you? (circle one)
  - a. Take corrective action to correct any deficiency(ies)
  - b. Resign from the department

10. Do you currently use tobacco products-cigarettes/cigars/pipe/chewing tobacco?

(circle one)    Y        N

***If you answered NO to question #10, you have completed the survey, if you answered***

***YES to question #10, please continue and answer the following questions.***

11. Would you be interested in a department-sponsored class for smoking/tobacco cessation?

(circle one)    Y        N

12. If tobacco use was prohibited by employees of the fire department, would you? (circle one):

- a. Quit tobacco use
- b. Resign from the department.

## Appendix B: Implementation Survey Results

#1	#2	#3	#4		#5		#6		#7		#8		#9		#10		#11		#12	
			Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
61	25	2		1		1		1		1		1		1		1		1		
59	29	1	1			1		1		1	1		1			1				
56	26	2	1		1			1		1		1	1			1				
54	14	5		1	1			1		1	1		1			1				
53	24	1		1	1			1		1	1		1			1				
52	28	1		1		1		1		1	1		1		1		1		1	
52	21	1		1	1		1			1		1	1			1				
51	18	1		1	1			1		1		1	1		1		1		1	
51	29	1		1	1		1			1		1	1			1				
50	20	1		1	1			1		1		1	1			1				
49	10	2	1		1		1			1		1	1			1				
47	25	2		1	1		1			1	1		1			1				
46	14	1	1		1		1			1		1	1			1				
46	22	1		1	1			1		1	1		1			1				
46	25	1	1		1			1		1		1	1			1				
45	19	5		1	1			1		1		1	1			1				
44	18	1		1	1			1		1		1	1		1			1		1
44	20	1	1		1		1			1		1	1			1				
44	23	1		1	1		1			1		1	1			1				
43	3	2		1	1			1		1		1	1		1		1		1	
42	22	2		1		1		1		1	1		1		1			1		1
42	2	2	1		1			1		1		1	1			1				
38	3	3	1		1			1	1			1	1			1				
37	0.5	1	1			1		1		1		1	1			1				
36	8	2		1	1			1		1		1	1		1			1	1	
36	2	1	1		1			1		1		1	1			1				
35	9	1	1		1		1			1		1	1		1			1		1
35	12	1		1	1		1			1		1		1	1			1		1
35	15	5	1		1			1		1	1		1			1				
34	8	1	1		1		1			1		1	1		1		1		1	
34	9	1	1		1			1		1		1	1		1			1	1	
33	13	2	1		1		1			1		1	1			1				
33	12	2		1	1			1		1		1	1			1				
33	1	1		1	1			1		1		1	1			1				



## Appendix B: Implementation Survey Results (continued)

#1	#2	#3	Question Number																	
			#4		#5		#6		#7		#8		#9		#10		#11		#12	
			Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
31	10	1	1		1		1			1		1	1			1				
31	6	2	1		1		1			1		1	1			1				
30	12	2	1		1			1		1		1	1			1				
29	1	1		1	1			1		1		1	1		1			1	1	
28	5	5	1		1			1		1	1		1		1		1			1
28	7	1	1		1			1		1		1	1			1				
28	6	1	1		1			1		1		1	1			1				
27	7	1	1		1			1		1		1	1		1		1		1	
27	8	1	1		1		1			1		1	1			1				
27	1	1	1		1			1		1		1	1			1				
26	8	1	1		1			1		1		1	1			1				
26	4	1	1		1			1		1	1		1			1				
26	8	1	1		1			1		1		1	1			1				
26	3	3		1	1			1		1		1	1			1				
25	7	2	1		1			1		1		1	1		1		1		1	
25	4	2	1		1			1		1		1	1		1		1		1	
25	6	2		1	1		1			1		1	1			1				
25	2	1	1		1		1			1		1	1			1				
23	0.5	1	1		1			1		1		1	1		1		1		1	
23	0.8	1	1		1			1		1		1	1			1				
23	1	1	1		1			1		1		1	1			1				
22	0.8	1		1	1			1		1		1	1			1				
22	2	1	1		1			1		1		1	1			1				
21	0.3	1	1		1			1		1		1	1			1				
21	3	3	1		1			1		1		1	1			1				
21	5	1	1		1			1		1		1	1			1				
21	2	1	1		1			1		1		1	1			1				
20	2	2	1		1			1		1		1	1			1				
20	1	2	1		1			1		1		1	1			1				
19	1	2	1		1			1		1		1	1		1		1		1	
18	0.3	1	1		1			1		1		1	1			1				
18	0.3	1	1		1			1		1		1	1			1				

### Appendix C: Implementation Schedule

In an effort to effectively implement the Occupational Medical Program in the Saginaw Township Fire Department in a timely manner, the following implementation schedule has been established.

\*August 1, 2005

Establish occupational medical program steering committee to review analysis and planning for implementation. Committee comprised of six members: the safety officer from each station (3); and one person at-large from each station (3).

Evaluate objectives of NFPA 1582 with current departmental mission, objectives, and policies.

Review medical requirements of NFPA 1582 with department physician to ensure compliance.

Develop financial cost projections (1, 3, and 5 year) for program implementation.

Conduct survey of personnel to assess possible concerns/resistance to implementation.

Create draft version of departmental policy for occupational medical program

Utilizing survey results develop organizational impact study of proposed implementation.

Develop criteria/method to evaluate implementation process and results.

\*September 1, 2005

Steering committee to meet with all departmental officers to review results of analysis and planning, and discuss proposed implementation process.

\*September 15, 2005

Introduction of proposed occupational medical program to all personnel, including rationale, purpose, goals, and objectives.

Appendix C: Implementation Schedule (continued)

Review background and record of line-of-duty-deaths, with an emphasis on medical related deaths.

Review components of NFPA standards, 1500, 1582, and 1583.

Discuss proposed departmental policy and requirements of program including

Examine implementation timeline and schedule.

Provide two week review period for submission of comments and revisions from personnel.

\*October 1, 2005

Steering committee reviews feedback from personnel and conducts all appropriate modifications and corrections to policy.

\*October 10, 2005

Presentation of Saginaw Township Fire Department Occupational Medical Program, including implementation schedule, budget projections, departmental policy, and complete copy of *NFPA 1582, Standard on Comprehensive Occupational Medical Programs for Fire Departments* to Saginaw Charter Township board of trustees for review and consideration.

\*October 24, 2005

First reading of proposal to adopt *NFPA 1582, Standard on Comprehensive Occupational Medical Programs for Fire Departments* by the Saginaw Charter Township board of trustees.

\*November 14, 2005

Second reading of proposal, and vote to approve adoption of *NFPA 1582* by the Saginaw Charter Township board of trustees.

## Appendix C: Implementation Schedule (continued)

\*November 15, 2005

Adoption by Saginaw Township Fire Department of departmental policy #316, *Occupational Medical Program* and revised policy #202, *Applicant Processing*. Beginning this date all candidates will be subject to the conditions of NFPA 1582 as a prerequisite of their employment. Responsibility of coordination and compliance of medical evaluation program is assigned to station safety officers. First cycle of medical evaluations to commence for incumbent members on limited basis due to current (FY 05-06) budget amounts; all hazardous materials technician members (to comply with *Code of Federal Regulations* (CFR) 1910.120) and those members 50 years of age and older. All evaluations are required to be completed by April 30, 2006.

\*February 1, 2006

Steering committee conducts evaluation/assessment of all incumbents that have completed medical evaluations to date to assess effectiveness of program.

\*May 1, 2006

Budget amount for medical evaluations for FY 06-07 increased by \$17,000 to total of \$29,000.

Second cycle of medical evaluations for incumbent members to commence. This cycle incorporates all incumbent members 30 years of age and older, as well as all incumbents included in first cycle. All evaluations are required to be completed by 04/30/07.

\*May 1, 2007

Budget amount for medical evaluations for FY 07-08 increased by \$16,000 to total of \$45,000.

Appendix C: Implementation Schedule (continued)

Third cycle of medical evaluations to commence. This cycle incorporates all incumbent members 18 years of age and older, as well as all incumbents included in previous two cycles. All evaluations are required to be completed by 04/30/08.

\*April 30, 2008

Completion of phase-in of medical evaluation program. New members of STFD employed since November 15, 2005 have been hired utilizing the criteria of NFPA 1582, and all STFD members have completed at least one annual medical evaluation. Effective this date all STFD members will annually complete an occupational medical evaluation as per the requirements of NFPA standard 1582.

## Appendix D: Departmental Medical Evaluation Policy

**SAGINAW TOWNSHIP  
FIRE DEPARTMENT****HEALTH and SAFETY  
OCCUPATIONAL MEDICAL PROGRAM  
Page 1 of 4****EFFECTIVE: NOVEMBER 2005****NO 316****PURPOSE**

Members need to understand that the program is not punitive in nature but designed to ascertain their individual abilities to perform tasks particular to the normal functions expected of them. Participation in this program is a mandatory component of each member's employment with the department. Failure to comply with the requirements and conditions of this policy may result in termination from the department.

The purpose of the occupational medical evaluation of the members of STFD as delineated by *NFPA 1582, Standard on Comprehensive Occupational Medical Program for Fire Departments*, 2003 Edition, section 7.2.2 are as follows:

1. Identifying conditions that interfere with a member's physical or mental ability to safely perform essential job tasks without undue risk of harm to self or others.
2. Monitoring the effects of exposure to specific biological, physical, or chemical agents on individual members.
3. Detecting changes in a member's health that can be related to harmful working conditions.

Appendix D: Departmental Medical Evaluation Policy (continued)

**OCCUPATIONAL MEDICAL PROGRAM**  
**Page 2 of 4**

4. Detecting patterns of disease or injury occurrence in the workforce that could indicate underlying work-related problems.
5. Providing members with information about their current health, promoting wellness, and referring them for appropriate further evaluation and treatment.
6. Providing members with information and education about occupational hazards'
7. Providing a cost-effective investment in work-related disease prevention, early detection, and health promotion for members.
8. Complying with federal, state, local, and/or other jurisdictional requirements.

**REQUIREMENTS of PROGRAM**

1. The evaluations shall be completed annually every 12 months (+/-3 months).
2. Medical evaluations shall be performed following occupational exposure, illness, injury, or protracted absence from the job. The scope of that evaluation shall be determined by the fire department physician reviewing the type and severity of the condition.
3. Annual medical and fitness evaluations shall be compared to baseline and subsequent evaluations to identify clinically relevant changes.
4. Each medical evaluation shall include a:
  - a. Medical history (including exposure history)
  - b. Physical examination
  - c. Blood tests
  - d. Urinalysis
  - e. Vision tests
  - f. Audiograms
  - g. Spirometry

Appendix D: Departmental Medical Evaluation Policy (continued)

**OCCUPATIONAL MEDICAL PROGRAM**  
**Page 3 of 4**

- h. Chest x-ray (as indicated)
- i. Electrocardiogram
- j. Cancer screening (as indicated)
- k. Immunizations and infectious disease screening (as indicated)

5. Each fitness evaluation shall include:

- a. Weight and Body Composition
  - i. Body weight
  - ii. Body composition evaluation
- b. Fitness Evaluation
  - i. Aerobic capacity
  - ii. Muscular strength
  - iii. Muscular endurance
  - iv. Flexibility

PROGRAM COST

Saginaw Township is responsible for the expenses associated with the administration and execution of the Occupational Medical Program.

PROGRAM RESULTS

All medical information collected as part of the Occupational Medical Program shall be considered confidential medical information and may be released by the fire department physician only with the specific written consent of the member.

Individual STFD members will receive a report of their results from the Occupational Medical Program. The fire department will not receive any of the results/reports except a written statement from the fire department physician indicating the individual is capable of performing, with or without reasonable accommodations, the



Appendix D: Departmental Medical Evaluation Policy (continued)

**OCCUPATIONAL MEDICAL PROGRAM**  
**Page 4 of 4**

essential functions of his/her position without posing a significant risk to the safety and health of the member or others.

In the event the physical examination results in the employee not being declared fit for duty, the employee and his/her personal physician, in consultation the fire department physician shall determine a corrective course of action that may lead to the restoration to full duty. The member may be permitted to participate in a light/limited duty program, reassignment of duties, or sick leave, as examples, after consultation with the physician and the Fire Chief. Medical and rehabilitation expenses associated with activities related to corrective actions are not the responsibility of Saginaw Township.

ORIGINAL ADOPTION: NOVEMBER 2005

Appendix E: Evaluation Survey

Date: \_\_\_\_\_

Medical Evaluations completed

Total Personnel Unfit for Duty

Unfit for Duty -resigned

Types of deficiencies (list)

Unfit for Duty -corrected deficiency

Types of deficiencies (list)